6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA-R08-OAR-2010–0406; FRL-9976-56-Region 8]

Approval and Promulgation of Air Quality Implementation Plans; North Dakota; Regional Haze State Implementation Plan

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve certain portions of a State Implementation Plan (SIP) revision to address regional haze submitted by the Governor of North Dakota on March 3, 2010, along with SIP Supplement No. 1 submitted on July 27, 2010, SIP Amendment No. 1 submitted on July 28, 2011 and SIP Supplement No. 2 submitted on January 2, 2013 (collectively, "the Regional Haze SIP"). Specifically, the EPA is proposing to approve the nitrogen oxides (NO_x) Best Available Retrofit Technology (BART) determination for Coal Creek Station included in SIP Supplement No. 2. Coal Creek Station is owned and operated by Great River Energy (GRE) and is located near Underwood, North Dakota. This Regional Haze SIP was submitted to address the requirements of the Clean Air Act (CAA or "the Act") and our rules that require states to develop and implement air quality protection plans to reduce visibility impairment in mandatory Class I areas caused by emissions of air pollutants from numerous sources located over a wide geographic area (also referred to as the "regional haze program"). States are required to assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas. The EPA is taking this action pursuant to section 110 of the CAA.

DATES: Written comments must be received on or before **[Insert date 30 days after date of publication in the *Federal Register*]**.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA-R08-OAR-2010–0406 at https://www.regulations.gov. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from www.regulations.gov. The EPA may publish any comment received to the public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information, the disclosure of which is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit https://www.epa.gov/dockets/commenting-epa-dockets.

FOR FURTHER INFORMATION CONTACT: Aaron Worstell, Air Program, EPA, Region 8, Mailcode 8P-AR, 1595 Wynkoop Street, Denver, Colorado 80202-1129, (303) 312-6073, worstell.aaron@epa.gov.

I. Background

A. Requirements of the Clean Air Act and the EPA's Regional Haze Rule

In CAA section 169A, added in the 1977 Amendments to the Act, Congress created a program for protecting visibility in the nation's national parks and wilderness areas. This section of the CAA establishes "as a national goal the prevention of any future, and the remedying of

any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution."[1] On December 2, 1980, the EPA promulgated regulations to address visibility impairment in Class I areas that is "reasonably attributable" to a single source or small group of sources, otherwise known as reasonably attributable visibility impairment.[2] These regulations represented the first phase in addressing visibility impairment. The EPA deferred action on regional haze that emanates from a variety of sources until monitoring, modeling, and scientific knowledge about the relationships between pollutants and visibility impairment were improved.

Congress added section 169B to the CAA in 1990 to address regional haze issues. The EPA promulgated a rule to address regional haze on July 1, 1999.[3] The Regional Haze Rule (RHR) revised the existing visibility regulations to integrate provisions addressing regional haze and established a comprehensive visibility protection program for Class I areas. The requirements for regional haze, found at 40 CFR 51.308 and 51.309, are included in the EPA's visibility protection regulations at 40 CFR 51.300-51.309. The EPA revised the RHR on January 10, 2017.[4]

[1] 42 U.S.C. 7491(a). Areas designated as mandatory Class I Federal areas consist of national parks exceeding 6000 acres, wilderness areas and national memorial parks exceeding 5000 acres, and all international parks that were in existence on August 7, 1977. 42 U.S.C. 7472(a). In accordance with section 169A of the CAA, EPA, in consultation with the Department of Interior, promulgated a list of 156 areas where visibility is identified as an important value. 44 FR 69122 (November 30, 1979). The extent of a mandatory Class I area includes subsequent changes in boundaries, such as park expansions. 42 U.S.C. 7472(a). Although states and tribes may designate as Class I additional areas which they consider to have visibility as an important value, the requirements of the visibility program set forth in section 169A of the CAA apply only to "mandatory Class I Federal areas." Each mandatory Class I Federal area is the responsibility of a "Federal Land Manager." 42 U.S.C. 7602(i). When we use the term "Class I area" in this section, we mean a "mandatory Class I Federal area."
[2] 45 FR 80084 (December 2, 1980) (codified at 40 CFR part 51, subpart P).
[3] 64 FR 35714 (July 1, 1999) (amending 40 CFR part 51, subpart P).
[4] 82 FR 3078 (January 10, 2017).

The CAA requires each state to develop a SIP to meet various air quality requirements, including protection of visibility.[5] Regional haze SIPs must assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas. A state must submit its SIP and SIP revisions to the EPA for approval. Once approved, a SIP is enforceable by the EPA and citizens under the CAA; that is, the SIP is federally enforceable. If a state fails to make a required SIP submittal, or if we find that a state's required submittal is incomplete or not approvable, then we must promulgate a Federal Implementation Plan (FIP) to fill this regulatory gap, unless the state corrects the deficiency.[6]

B. Best Available Retrofit Technology (BART)

Section 169A of the CAA directs the EPA to require states to evaluate the use of retrofit controls at certain larger, often uncontrolled, older stationary sources in order to address visibility impacts from these sources. Specifically, section 169A(b)(2)(A) of the CAA and the RHR require states' implementation plans to contain such measures as may be necessary to make reasonable progress toward the natural visibility goal, including a requirement that certain categories of existing major stationary sources built between 1962 and 1977 procure, install, and operate the "Best Available Retrofit Technology" as determined by the states. Under the RHR, states are directed to conduct BART determinations for such "BART-eligible" sources that may reasonably be anticipated to cause or contribute to any visibility impairment in a Class I area.

On July 6, 2005, the EPA published the *Guidelines for BART Determinations under the Regional Haze Rule* (the "BART Guidelines") to assist states in determining which sources should be subject to the BART requirements and the appropriate emission limits for each

[5] CAA sections 110(a), 169A, and 169B, 42 U.S.C. 7410(a), 7491, and 7492(a).
[6] CAA section 110(c)(1), 42 U.S.C. 7410(c)(1).

covered source.[7] The process of establishing BART emission limitations follows three steps: first, identify the sources that meet the definition of "BART-eligible source" set forth in 40 CFR 51.301;[8] second, determine which of these sources "emits any air pollutant which may reasonably be anticipated to cause or contribute to any impairment of visibility in any such area" (a source which fits this description is "subject to BART"); and third, for each source subject to BART, identify the best available type and level of control for reducing emissions. Section 169A(g)(1) of the CAA requires that states must consider the following five factors in making BART determinations: (1) the costs of compliance; (2) the energy and non-air quality environmental impacts of compliance; (3) any existing pollution control technology in use at the source; (4) the remaining useful life of the source; and (5) the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology. States must address all visibility-impairing pollutants emitted by a source in the BART determination process. The most significant visibility impairing pollutants are sulfur dioxide (SO_2), NO_x, and particulate matter (PM).

A SIP addressing regional haze must include source-specific BART emission limits and compliance schedules for each source subject to BART. In lieu of requiring source-specific BART controls, states also have the flexibility to adopt alternative measures, as long as the alternative provides greater reasonable progress towards natural visibility conditions than BART (i.e., the alternative must be "better than BART").[9] Once a state has made a BART determination, the BART controls must be installed and operated as expeditiously as practicable,

[7] 70 FR 39104; 40 CFR part 51, appendix Y.
[8] BART-eligible sources are those sources that have the potential to emit 250 tons or more of a visibility-impairing air pollutant, were not in operation prior to August 7, 1962, but were in existence on August 7, 1977, and whose operations fall within one or more of 26 specifically listed source categories. 40 CFR 51.301.
[9] 40 CFR 51.308(e)(2) and (3).

but no later than 5 years after the date of the EPA's approval of the final SIP.[10] In addition to what is required by the RHR, general SIP requirements mandate that the SIP include all regulatory requirements related to monitoring, recordkeeping and reporting for the BART emission limitations. See CAA section 110(a); 40 CFR part 51, subpart K.

C. Reasonable Progress Requirements

In addition to BART requirements, as mentioned previously, each regional haze SIP must contain measures as necessary to make reasonable progress towards the national visibility goals. As part of determining what measures are necessary to make reasonable progress, the SIP must first identify anthropogenic sources of visibility impairment that are to be considered in developing the long-term strategy for addressing visibility impairment.[11] States must then consider the four statutory reasonable progress factors in selecting control measures for inclusion in the long-term strategy—the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of potentially affected sources.[12] Finally, the SIP must establish reasonable progress goals (RPGs) for each Class I area within the state for the plan implementation period (or "planning period"), based on the measures included in the long-term strategy. If an RPG provides for a slower rate of improvement in visibility than the rate needed to attain the national goal by 2064, the SIP must demonstrate, based on the four reasonable progress factors, why the rate to attain the national goal by 2064 is not reasonable and the RPG is reasonable.[13]

D. Consultation with Federal Land Managers (FLMs)

[10] CAA section 169A(g)(4); 40 CFR 51.308(e)(1)(iv).
[11] 40 CFR 51.308(d)(3)(iv).
[12] *See* CAA section 169A(g)(1), 42 U.S.C. 7491(g)(1) (defining the reasonable progress factors); 40 CFR 51.308(d)(1)(i)(A).
[13] 40 CFR 51.308(d)(1)(ii).

The RHR requires that a state consult with FLMs before adopting and submitting a required SIP or SIP revision.[14] States must provide FLMs an opportunity for in-person consultation at least 60 days before holding any public hearing on the SIP. This consultation must include the opportunity for the FLMs to discuss their assessment of impairment of visibility in any Class I area and to offer recommendations on the development of the RPGs and on the development and implementation of strategies to address visibility impairment. Further, a state must include in its SIP a description of how it addressed any comments provided by the FLMs. Finally, a SIP must provide procedures for continuing consultation between the state and FLMs regarding the implementation of the state's visibility protection program, including development and review of SIP revisions, 5-year progress reports, and the implementation of other programs having the potential to contribute to impairment of visibility in Class I areas.

E. Regulatory and Legal History of the North Dakota Regional Haze SIP

The Governor of North Dakota originally submitted a Regional Haze SIP to the EPA on March 3, 2010, followed by SIP Supplement No. 1 submitted on July 27, 2010, and SIP Amendment No. 1 submitted on July 28, 2011. The EPA initially acted on North Dakota's Regional Haze SIP on April 6, 2012.[15] Among other things, the Regional Haze SIP included a BART emission limit for NO_x for Units 1 and 2 at Coal Creek Station of 0.17 lb/MMBtu averaged across the two units (on a 30-day rolling average)[16], represented by modified and additional separated overfire air (SOFA), close-coupled overfire air (COFA), and low NO_x

[14] 40 CFR 51.308(i).
[15] 77 FR 20894.
[16] Throughout, 30-day rolling average emission limits are based on boiler operating days.

burners (LNB) (collectively referred to as LNC3+).[17] When considering the next most stringent control option, selective non-catalytic reduction (SNCR; in addition to the existing LNC3), North Dakota took into account the potential for ammonia from the SNCR to contaminate the fly ash, which is a marketable product sold by GRE. Ultimately, the State concluded that "[b]ecause of the potential for lost sales of fly ash, the negative environmental effects of having to dispose of the fly ash instead of recycling it into concrete, and the very small amount of visibility improvement from the use of SNCR, this option is rejected as BART."[18] The State's Regional Haze SIP was submitted to meet the requirements of the regional haze program for the first planning period of 2008 through 2018.

During our previous review of North Dakota's NO_x BART analysis for Coal Creek Station in 2012, the EPA identified an error in the costs associated with lost fly ash sales.[19] At our request, and after submitting the Regional Haze SIP in 2010, North Dakota obtained additional supporting information from GRE for lost fly ash revenue and for the potential cost of fly ash ammonia mitigation. The supporting information included an updated cost analysis from GRE noting that the correct sales price for fly ash was $5/ton instead of $36/ton. The updated analysis included corrected fly ash revenue data and ammonia mitigation costs. That analysis, dated June 16, 2011, indicated that the cost effectiveness for SNCR at Coal Creek Station Units 1 and 2 would be $2,318/ton of NO_x emissions reductions rather than the original estimate of $8,551/ton. Because the State's cost of compliance analysis was based upon fundamentally flawed and greatly inflated cost estimates regarding lost fly ash revenue, we concluded that the

[17] In the 2013 SIP supplement, modified and additional SOFA, COFA, and LNB are referred to as LNC3+. Hereinafter in this proposed rule, this combination of controls will also be referred to as LNC3+. By contrast, the existing controls, SOFA (unmodified), COFA, and LNB are referred to as LNC3.
[18] Regional Haze SIP, Appendix D.2, BART Determination for Coal Creek Station Units 1 and 2, 12/1/2009, p. 20.
[19] 76 FR 58603; 77 FR 20921.

SIP submittal failed to properly consider the cost of compliance in any meaningful sense as required by 40 CFR 51.308(e)(1)(ii)(A). We also concluded that GRE could avoid contaminating the fly ash by proper management of the ammonia injection rate; and thereby avoid losing fly ash sales altogether. Therefore, we disapproved the NO_x BART determination for the Coal Creek Station.[20]

In the same action, we promulgated a FIP that included a NO_x BART emission limit for Units 1 and 2 at the Coal Creek Station of 0.13 lb/MMBtu averaged across the two units (30-day rolling average), which GRE could meet by installing SNCR plus LNC3+.[21] This emission limit was based on the EPA's independent BART analysis, including the updated costs of compliance.

Subsequently, several petitioners challenged various aspects of the EPA's final rule in the Eighth Circuit Court of Appeals. Pertinent to this proposal, the State and GRE, the owner of the Coal Creek Station, challenged the EPA's disapproval of the State's determination that LNC3+ with an emission limit of 0.17lb/MMBtu averaged across the two units (30-day rolling average) is BART for Coal Creek Station. These same petitioners also challenged the EPA's determination that SNCR plus LNC3+ with an emission limit of 0.13lb/MMBtu averaged across the two units (30-day rolling average) is BART for the Coal Creek Station.

On January 2, 2013, North Dakota submitted Supplement No. 2 to the SIP, which was primarily intended to correct the error in the costs of compliance for SNCR plus LNC3+ related to lost fly ash sales. SIP Supplement No. 2 includes a revised five-factor BART evaluation for

[20] 77 FR 20894 (Apr. 6, 2012).

[21] The FIP also included: a reasonable progress determination and NOx emission limit for Antelope Valley Station Units 1 and 2 of 0.17 lb/MMBtu that applies singly to each of these units on a 30 -day rolling average, and a requirement that the owner/operator meet the limit as expeditiously as practicable, but no later than July 31, 2018; monitoring, record-keeping, and reporting requirements for the Coal Creek Station and Antelope Valley Station units to ensure compliance with the emission limitations; RPGs consistent with the approved SIP emission limits approved and the final FIP limits; and LTS elements that reflect the other aspects of the finalized FIP. Please refer to the EPA's final FIP rule for further information on the FIP requirements. 77 FR 20894 (Apr. 6, 2012).

Coal Creek Station that largely replaces the five-factor evaluation contained in the Regional Haze SIP that was submitted in 2010 and 2011. SIP Supplement No. 2 affirms the State's earlier BART determination of 0.17 lb/MMBtu averaged across the two units (30-day rolling average) to be met with LNC3+. SIP Supplement No. 2 was submitted after the EPA took final action on the Regional Haze SIP in 2012, and is the focus of this proposed rule.

On September 23, 2013, the Eighth Circuit concluded that the EPA properly disapproved portions of the State's Regional Haze SIP, including the State's NO_x BART determination for the Coal Creek Station.[22] In particular, the court ruled that the EPA's role in reviewing the State's SIP was not merely ministerial, and that the EPA acted properly in disapproving the State's NO_x BART determination for the Coal Creek Station that was based on erroneous costs of compliance. However, the court vacated the EPA's FIP promulgating an emission limit of 0.13 lb/MMbtu (30-day rolling average), holding that the EPA had failed to consider existing pollution control technology[23] in use at the Coal Creek Station. More specifically, the court found that the EPA's refusal to consider DryFining™ as an existing pollution control because it had been voluntarily installed after the regional haze baseline date was arbitrary and capricious. DryFining™ is an innovative technology developed by GRE that reduces moisture and refines lignite coal, increasing the efficiency and performance of the fuel while reducing emissions.

II. Coal Creek Station – NO_x BART Determination

Coal Creek Station is a mine-mouth electrical generating plant, consisting primarily of two steam generators (each with a 550 MW capacity) and associated coal and ash handling systems. The units are identical Combustion Engineering boilers that tangentially fire pulverized lignite coal. Since

[22] *North Dakota v. United States EPA*, 730 F.3d 750 (8th Cir. 2013), *cert. denied*, 134 S. Ct. 2662 (2014).
[23] Pursuant to Section 169A(g)(1) of the CAA, "any existing pollution control technology in use at the source" is one of the five factors that must be considered when making a BART determination.

at least 1999, both units have been equipped with the following combustion controls: SOFA, COFA, and LNB. These combustion controls are collectively referred to as LNC3. In addition, DryFining™ was fully installed on both units by mid-2010.

The State analyzed the impact of Coal Creek on visibility in Class I areas, and found that the source was subject to BART requirements.[24]

A. North Dakota's NO_x BART Determination

To address the EPA's disapproval of the NO_x BART determination for Coal Creek Station, North Dakota submitted SIP Supplement No. 2 to the EPA on January 2, 2013. Because the two Coal Creek boilers are identical, the State performed a single BART analysis that is relevant to both units. The State's supplemental evaluation is provided in Appendix B.2.1 of SIP Supplement No. 2. The supplemental evaluation is informed by GRE's refined BART analysis of April 5, 2012, updated June 6, 2012, and found in Appendix C.2.1 of SIP Supplement No. 2.

The State considered only LNC3+, SNCR (with existing LNC3), and SNCR plus LNC3+ as technically feasible control options. Both the State and the EPA have previously determined that selective catalytic reduction and low temperature oxidation are not required as BART.[25] In addition, because the State found that ammonia slip from SNCR has the potential to negatively impact fly ash sales, it evaluated three different scenarios for the SNCR and SNCR plus LNC3+ control options: 0% lost fly ash sales, 30% lost fly ash sales, and 100% lost fly ash sales. The State determined a control effectiveness for LNC3+ of 23.9%, for SNCR of 24.9% (with existing LNC3), and for SNCR plus LNC3+ of 39.3%.

A summary of the State's NO_x BART analysis is provided in Table 1. Note that costs are provided in 2011 dollars.

[24] Regional Haze SIP, Section 7.3.1; 76 FR 58553.
[25] Regional Haze SIP, Appendix B.2; 76 FR 58622-23.

Table 1. Summary of Coal Creek NO_x BART Analysis for Unit 1 and Unit 2 Boilers

Control Option[a]	Control Efficiency (%)	Annual Emission Rate (lb/MMBtu)	Annual Emission Reductions (tons/yr)	Cost Effective-ness ($/ton)	Incremental Cost Effective-ness ($/ton)[b]	Visibility Benefit (delta dv)[c,d]
SNCR plus LNC3+						
100% Lost Fly Ash Sales	39.3	0.122	1,998	4,444	10,350	1.623
30% Lost Fly Ash Sales	39.3	0.122	1,998	3,305	7,449	1.623
0% Lost Fly Ash Sales	39.3	0.122	1,998	2,195	4,619	1.623
SNCR with existing LNC3						
100% Lost Fly Ash Sales	24.9	0.151	1,265	7,194	163,471	1.529
30% Lost Fly Ash Sales	24.9	0.151	1,265	5,396	118,863	1.529
0% Lost Fly Ash Sales	24.9	0.151	1,265	3,643	75,373	1.529
LNC3+	23.9	0.153	1,214	629	NA	1.463

[a] DryFining™ is common to each of the control options.
[b] The incremental costs listed for SNCR plus LNC3+ are for between SNCR plus LNC3+ and LNC3+.
[c] The visibility modeling that GRE performed for Coal Creek Units 1 and 2 included SO_2 controls in addition to the noted NO_X control. Accordingly, the modeling results summarized above reflect the chosen SO_2 BART control, scrubber modifications, in addition to the noted NO_X control option. Thus, these values do not reflect the distinct visibility benefit from each NO_X control option, but do provide the incremental benefit between the NO_X control options.
[d] The visibility improvement described in this table represents the change in the maximum 98th percentile impact over the modeled 3-year meteorological period (2001–2003) at the highest impacted Class I area, Theodore Roosevelt, relative to a pre-controlled baseline. Refer to the spreadsheet created by EPA titled "CALPUFF Modeling Results from GRE Supplemental Analysis of 4-5-2012.xlsx".

The State considered each of the five statutory BART factors when making its NO_x BART determination for Coal Creek Station as described below.

Costs of Compliance

When the State began development of its regional haze program in 2006, it established costs of compliance thresholds for both cost effectiveness and incremental cost effectiveness

above which costs are considered excessive.[26] When adjusted to 2011 dollars, the threshold for cost effectiveness is $4,100/ton, while the threshold for incremental cost effectiveness is $7,300/ton. The cost effectiveness of LNC3+, $629/ton, is very reasonable by this standard.[27] The State found that SNCR, with the existing LNC3 combustion controls, is clearly an inferior option to LNC3+ because this control option presents only marginally more control effectiveness at much higher cost per ton values in comparison to LNC3+. In addition, the State found that the incremental cost between these two options to be excessive regardless of what percentage of fly ash sales are lost. For the remaining control option, SNCR plus LNC3+, the State found that whether the costs of compliance were reasonable depends on the percentage of fly ash sales that may be lost. If no fly ash sales are lost, the State found that neither the cost effectiveness, $2,195/ton, or incremental cost effectiveness relative to LNC3+, $4,619/ton, would be deemed excessive when using the State's criteria. However, if 30% of the fly ash sales are lost, the State found that the incremental cost effectiveness relative to LNC3+ of $7,449/ton exceeds the relevant threshold. If all of the fly ash sales are lost, then the State found that both thresholds are exceeded. Moreover, if none of the fly ash can be sold, the State found that $31 million of existing fly ash handling equipment would be rendered useless with likely no opportunity to retrieve the resources invested. The State concluded that it is likely that some fly ash sales will be lost. However, because it is difficult to know precisely how much of the fly ash sales will be lost, the State found that the costs of compliance are uncertain.

Energy and Non-Air Quality Environmental Impacts

When evaluating the environmental and non-air quality impacts, the State emphasized

[26] Refer to Appendix E of the Regional Haze SIP.
[27] Incremental cost effectiveness for LNC3+ is not calculable because it is the least effective control option considered.

that recycling the fly ash and keeping this material out of a landfill is important. The State expressed concerns that the use of SNCR may prevent the recycling of fly ash.

Any Existing Pollution Controls in Use at the Source

Regarding any existing pollution control in use at the source, the State noted that SOFA, COFA, and LNB (collectively referred to as LNC3) had been in place at the facility for some time, until combustion controls on Unit 2 were upgraded to LNC3+ in 2007. Unit 1 has not been similarly modified. Also, both units were equipped with DryFining™ in 2010. Unlike in the original BART evaluation, the State's 2013 supplemental BART evaluation recognizes the NO_x emission reduction that can be attributed to DryFining™. When North Dakota submitted the Regional Haze SIP in 2010, it based the BART analysis on a historical baseline emission rate of 0.22 lb/MMBtu (annual average, 2000-2004) that reflected NO_x reductions achieved with the existing combustion controls (LNC3). At that time, although it had been installed, the effect of DryFining™ on NO_x emissions was uncertain. Since then, the State has found that the technology can reduce NO_x emissions by about 0.02 lb/MMBtu. The State has also determined that, because LNC3+ had been installed on Unit 2 for the purpose of meeting BART, it was inappropriate for the baseline to reflect the additional reduction achieved by LNC3+ relative to LNC3. Accordingly, the State used a revised baseline emission rate of 0.201 lb/MMBtu in SIP Supplement No. 2 that reflects the use of both LNC3 and DryFining™.

Remaining Useful Life of the Source

The State noted that the source is expected to have a remaining useful life of at least 20 years.[28] The State has used this value in the calculations of cost effectiveness. Otherwise, the remaining useful life did not have an impact on the State's selection of NO_x BART.

[28] Regional Haze SIP, Appendix D.2, BART Determination for Coal Creek Station Units 1 and 2, 12/1/2009, p. 12.

Degree of Improvement in Visibility

The State evaluated visibility impacts (and improvement) at the two affected Class I areas: Theodore Roosevelt National Park (NP) and Lostwood Wilderness Area. The visibility impacts were provided in GRE's April 5, 2012, submittal to the State, and were based on CALPUFF modeling.[29] At the most impacted Class I area, Theodore Roosevelt NP, the State found that the incremental visibility improvement for SNCR plus LNC3+ versus LNC3+ is 0.106 dv for the 98th percentile, and this improvement was considered negligible by the State. As such, the State concluded that the visibility improvement does not warrant the selection of SNCR plus LNC3+ as BART.[30] Finally, because the costs of compliance cannot be determined precisely due to the uncertainty surrounding lost fly ash sales, the State chose to weigh the visibility benefits heavily in its BART determination.

After evaluating the five BART factors, and for the reasons stated above, North Dakota determined that BART should be based on the installation of LNC3+. The State's BART analysis used an annual emission rate for LNC3+ of 0.153 lb/MMBtu, reflecting the performance demonstrated at Unit 2. However, the State noted that the shorter averaging period of the BART emission limit, 30 days, requires a slightly higher value.[31] Accordingly, the State established an emission limit of 0.17 lb/MMBtu averaged across the two units (30-day rolling average). The State required that compliance with the emission limit be as expeditiously as practicable but in no event later than 5 years after the EPA approves the BART requirements for Coal Creek Station. Further, the State required that compliance be demonstrated within 180 days of initial

[29] Refer to Appendix A.1 of the Regional Haze SIP regarding the CALPUFF modeling methodology.
[30] The State calculated the incremental visibility benefit between SNCR plus LNC3+ and LNC3+ (both with scrubber upgrades for SO_2) as the difference between the respective modeled visibility impacts, or 1.623 dv – 1.529 dv = 0.106 dv.
[31] North Dakota found that 30-day rolling average emission rates are expected to be at least 5-15% higher than the annual average emission rate. For example, see Appendix B.1 of SIP, page 16.

startup of the equipment required to meet the BART limits, but no later than 5 years after the EPA approves the BART requirements for the Coal Creek Station.

B. EPA's Evaluation of North Dakota's NO_x BART Determination

In our evaluation of the State's NO_x BART determination for Coal Creek Station, we seek to address two deficiencies that relate to our disapproval of the State's 2010 NO_x BART determination and resultant FIP. First, we intend to revisit the State's NO_x BART determination in light of the fact that SIP Supplement No. 2 addresses the error related to lost fly ash sales in the estimation of the costs of compliance. Second, we intend to re-evaluate the State's BART determination for Coal Creek in consideration the Eighth Circuit's decision as it relates to any existing pollution controls.

As described earlier, in 2012, the EPA disapproved the State's BART determination in part because of an error in the sales price for fly ash that affected the State's consideration of the costs of compliance. GRE used a sales price of $36/ton for fly ash in calculating the cost effectiveness for SNCR. The State in turn relied on these values in support of its 2010 BART determination. In 2011, GRE indicated the correct sales price for fly ash was $5/ton instead of $36/ton. Subsequently, when commenting on EPA's 2011 proposed rule,[32] GRE indicated that, rather than $5/ton, the lost fly ash sales revenue should be based on the 2010 average per ton freight on board (FOB) price of $41.00, with 30% ($12.30/ton) of the sale price going to GRE as revenue. The remainder of the revenue, $28.79/ton, goes to Headwaters Resources, Inc. (HRI), GRE's partner in the sale and distribution of fly ash. In our 2012 final rule, we responded that we were not convinced that such an increase (over the $5/ton price) would be appropriate because GRE did not provide any detail on the basis for the increased price. However, in GRE's revised

[32] 76 FR 58570 (Sep. 21, 2011).

BART analysis of April 5, 2012, the company clarified that $5/ton figure represented what GRE received as a portion of the FOB price before December of 2011. GRE also reaffirmed the then-current ash sales contract (as of April 2012) required payments to GRE that total 30% of the price. GRE points out that HRI has "invested heavily into fly ash sales infrastructure including terminals and storage facilities, conveying equipment, scales and train car shuttles" and that HRI "financed GRE's portion of the infrastructure through a per ton payment on fly ash sales."[33] Accordingly, we find that the revised cost effectiveness value for SNCR plus LNC3+, as well as the incremental cost effectiveness value of SNCR plus LNC3+ compared to LNC3+, in SIP Supplement No. 2 are reliable because they are based on an established contractual sales price for fly ash.

In the 2011 proposed FIP, the EPA agreed that use of SNCR might result in lost ash sales and the need to landfill fly ash due to ammonia contamination. These additional costs were included in our cost analysis supporting the proposed FIP. However, we also invited comment on the assumption that use of SNCR would result in lost fly ash sales and on the availability of ammonia mitigation techniques.[34] We received responsive comments on both sides of the issue. Ultimately, we concluded that it is possible to control ammonia slip from SNCR to within the range of 2 ppm or less, and that it is widely accepted that ammonia at this level does not impact the potential sales and use of fly ash in concrete. Accordingly, we concluded that charges for lost fly ash sales should not be applied to the SNCR cost analysis and that SNCR can be successfully deployed at the Coal Creek Station in a cost- effective manner. Specifically, we calculated a cost effectiveness of $1,313/ton.[35] In consideration of the costs of compliance, and the remaining

[33] GRE's refined BART analysis of April 5, 2012, p. 17.
[34] 76 FR 58620.
[35] 77 FR 20925.

BART factors, we concluded that BART is represented by SNCR plus LNC3+.

In its SIP Supplement No. 2, North Dakota contested the lost ash sales analysis reflected in the EPA's final rule, citing studies that, according to the State, supported its assertions. North Dakota contended that "EPA's assertion that no ash sales will be lost is speculative."[36]

Given the importance of assumptions about lost fly ash sales in assessing the costs of compliance, and in consideration of more than five years having passed since we originally established BART for the Coal Creek Station, it is appropriate that we investigate and analyze this issue further. Accordingly, we once again invite comment in relation to the following: 1) whether ammonia slip from the SNCR can be controlled to levels sufficient enough to prevent unacceptable ammonia contamination of the fly ash; 2) what levels of ammonia contamination are acceptable to fly ash marketers and end-users; and 3) availability, applicability, and cost of applying ammonia mitigation techniques to fly ash derived from lignite coal.

On the matter of any existing controls, the State's BART evaluation now relies on a baseline NO_x emission rate of 0.201 lb/MMBtu (annual) that reflects the use of DryFining™. As noted earlier, this baseline emission rate incorporates the 0.02 lb/MMBtu reduction that is achieved with the technology. As a result, the State's BART analysis reasonably considers "any existing pollution control technology in use at the source," consistent with the Eighth Circuit decision.[37]

With these two issues appropriately addressed by the State's SIP Supplement No. 2, and because we have not identified any further deficiencies, we conclude that North Dakota has reasonably considered the five statutory BART factors in making its BART determination for the Coal Creek Station in accordance with the CAA and RHR. Therefore, we propose to approve the

[36] Supplemental Evaluation of NOx BART Determination for Coal Creek Station Units 1 and 2, at 10-11.
[37] 77 FR at 20925; *see also North Dakota*, 730 F.3d at 764.

State's NO_x BART emission limit of 0.17 lb/MMBtu averaged across the two units (30-day rolling average), which is based on LNC3+.

III. Coordination with FLMs

Theodore Roosevelt National Park is managed by the National Park Service (NPS), while the Lostwood Wilderness Area is managed by the U.S. Fish and Wildlife Service (FWS). As described in section I.D of this proposed rule, the Regional Haze Rule grants the FLMs a special role in the review of regional haze SIPs. Under 40 CFR 51.308(i)(2), North Dakota was obligated to provide the FLMs with an opportunity for consultation in development of the State's proposed SIP revisions. By written correspondence dated August 8, 2012, North Dakota provided the FLMs the opportunity to comment on the draft SIP Supplement No. 2.[38] The FWS submitted comments to North Dakota in a letter dated October 29, 2012, and the State responded to those comments in its response to public comments.[39] No other FLMs commented. The EPA considers the State's obligation to consult with the FLMs on the SIP revision to be fulfilled.

IV. The EPA's Proposed Action

In this action, the EPA is proposing to approve certain portions of North Dakota's Regional Haze SIP. Specifically, the EPA is proposing to approve the NO_x BART determination for the Coal Creek Station, included in SIP Supplement No. 2, of 0.17 lb/MMBtu averaged across the two units (30-day rolling average). Refer to the final action of April 6, 2012, regarding EPA's disapproval or approval of other elements of North Dakota's Regional Haze SIP.

In addition, the EPA plans to remove from the Code of Federal Regulations the FIP requirements for Coal Creek Station that the Eighth Circuit vacated in the *North Dakota* decision

[38] Refer to Appendix J.3.4 of the SIP Supplement.
[39] Refer to Appendix F.8.1 of the SIP Supplement.

and are therefore not enforceable as a matter of law. We are not inviting public comment on this portion of our action.

V. Incorporation by Reference

In this rule, the EPA is proposing to include, in a final EPA rule, regulatory text that includes incorporation by reference. In accordance with requirements of 1 CFR 51.5, the EPA is proposing to incorporate by reference the amendments described in section II. The EPA has made, and will continue to make, these materials generally available through www.regulations.gov and at the EPA Region 8 Office (please contact the person identified in the "For Further Information Contact" section of this preamble for more information).

VI. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely proposes to approve state law as meeting federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a significant regulatory action subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Is not an Executive Order 13771 (82 FR 9339, February 2, 2017) regulatory action because SIP approvals are exempted under Executive Order 12866;
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);

- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq*.);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because this action does not involve technical standards; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not proposed to apply on any Indian reservation land or in any other area where the EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Nitrogen dioxide, Particulate matter, Sulfur oxides.

Authority: 42 U.S.C. 7401 *et seq*.

Dated: April 13, 2018.

Douglas Benevento,
Regional Administrator,
Region 8.

40 CFR part 52 is proposed to be amended as follows:

PART 52 APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq*.

Subpart JJ – North Dakota

2. Section 52.1820 in paragraph (d) is amended by revising the table entry "PTC10005" under the centered heading "Coal Creek Station Units 1 and 2" to read as follows:

§ 52.1820 Identification of plan.

* * * * *

(d) * * *

Rule No.	Rule title	State effective date	EPA effective date	Final rule citation/date	Comments
* * * * * * *					
Coal Creek Station Units 1 and 2.					
* * * * * * *					
PTC10005	Air pollution control permit to construct for best available retrofit technology (BART)	12/20/12	[Insert date 30 days after date of publication in the **Federal Register**]	[Insert **Federal Register** citation], [Insert **Federal Register** date of publication]	Only: NO_x BART emissions limits for Units 1 and 2 and corresponding monitoring, recordkeeping, and reporting requirements.
* * * * * * *					

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3. Section 52.1825 is amended by revising paragraphs (a), (c)(1) and (d) to read as follows:

§52.1825 Federal implementation plan for regional haze.

(a) *Applicability*. This section applies to each owner and operator of the following coal-fired electric generating units (EGUs) in the State of North Dakota: Antelope Valley Station, Units 1 and 2.

* * * * *

(c) *Emissions limitations.* (1) The owners/operators subject to this section shall not emit or cause to be emitted NO_x in excess of the following limitations, in pounds per million British thermal units (lb/MMBtu), averaged over a rolling 30-day period:

Source name	NO_x Emission limit (lb/MMBtu)
Antelope Valley Station, Unit 1	0.17
Antelope Valley Station, Unit 2	0.17

(2) * * *

(d) *Compliance date*. The owners and operators of Antelope Valley Station shall comply with the emissions limitations and other requirements of this section as expeditiously as practicable, but no later than July 31, 2018, unless otherwise indicated in specific paragraphs.

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[FR Doc. 2018-08623 Filed: 4/25/2018 8:45 am; Publication Date: 4/26/2018]